

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of: Koichi OHTO

Appl. No.:	NEW	Group:
Filed:	July 21, 2003	Examiner:
For:	METHOD FOR FORMING A CAPPING LAYER ON A COPPER INTERCONNECT (as amended)	

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, DC 20231

July 21, 2003

Sir:

The following preliminary amendments and remarks are respectfully submitted in connection with the above-identified application.

IN THE TITLE:

Please change the title throughout the application to,
--METHOD FOR FORMING A CAPPING LAYER ON A COPPER INTERCONNECT--.

IN THE SPECIFICATION:

Please replace the paragraph beginning on pages 2-3, line 13, with the following rewritten paragraph:

--In a damascene method widely used for forming the interconnect by using the copper as the interconnect material, trenches formed in the interlayer dielectric film are filled with

a barrier metal and the copper, and the surplus copper and the surplus barrier metal on the dielectric film are removed by the chemical mechanical polishing to form the interconnect. In the current damascene method, since the copper easily reacts with the SiO_2 and diffuses during the formation of the interlayer dielectric film after the damascene interconnect formation, a cap dielectric film made of SiN for the copper having a thickness of about 50 to 100 nm is formed by the plasma CVD using the SiH_4 , NH_3 and N_2 . Thereafter, the interlayer dielectric film made of SiO_2 is formed.--.

Please replace the paragraph beginning on page 8, line 11, with the following rewritten paragraph:

--In a second embodiment, a SiN film was formed in accordance with procedures sequentially shown in Fig. 3A to 3F.--